



RETRAINEE - JOB CREATION

Training Proposal for:

**GKN Aerospace Chem-tronics Inc.
dba ASTECH Engineered Products**

Agreement Number: ET16-0184

Panel Meeting of: September 25, 2015

ETP Regional Office: San Diego

Analyst: M. Ray

PROJECT PROFILE

Contract Attributes:	Priority Rate Retrainee Job Creation Initiative	Industry Sector(s):	Manufacturing Aerospace and Defense Engineering Priority Industry: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Counties Served:	Orange	Repeat Contractor:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Union(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Number of Employees in:	CA: 1,398	U.S.:4,907	Worldwide: 12,345
<u>Turnover Rate:</u>	14%		
<u>Managers/Supervisors:</u> (% of total trainees)	5%		

FUNDING DETAIL

Program Costs	-	(Substantial Contribution)	(High Earner Reduction)	=	Total ETP Funding
\$518,640		\$0	\$0		\$518,640

In-Kind Contribution:	100% of Total ETP Funding Required	\$1,424,000
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TRAINING PLAN TABLE

Job No.	Job Description	Type of Training	Estimated No. of Trainees	Range of Hours		Average Cost per Trainee	Post-Retention Wage
				Class / Lab	CBT		
1	Retrainee Priority Rate	Computer Skills, Continuous Impr, Mfg Skills, PL-Mfg Skills	256	8 - 200	0	\$1,440	\$16.02
				Weighted Avg: 80			
2	Retrainee Priority Rate Job Creation Initiative	Computer Skills, Continuous Impr, Mfg Skills, PL-Mfg Skills	75	8 - 200	0	\$2,000	\$14.00
				Weighted Avg: 100			

Minimum Wage by County: Job Number 1: \$16.02 per hour for Orange County; and Job Number 2: \$13.35 per hour for Orange County.

Health Benefits: Yes No This is employer share of cost for healthcare premiums – medical, dental, vision.

Used to meet the Post-Retention Wage?: Yes No Maybe

Job Number 1 only: Up to \$2.02 per hour may be used to meet the Post-Retention Wage.

Wage Range by Occupation		
Occupation Titles	Wage Range	Estimated # of Trainees
Job Numbers 1 and 2:		
Administrative Support		20
Engineer		87
Technician		21
Mechanic		39
Welder		27
Inspector		28
Operator		66
Machinist		6
Supply Chain		7
Maintenance		12
Program Manager		2
Manager		16

INTRODUCTION

Headquartered in Irving, TX, GKN Aerospace Chem-tronics Inc. dba ASTECH Engineered Products (GKN Aerospace) (www.gkn.com), a division of GKN PLC, was established in 1993. Since its inception, GKN Aerospace has strategically acquired other leading aerospace manufacturers to create world-class aerospace business (Chem-tronics was acquired in 1999). GKN Aerospace is a global first-tier supplier of airframe and engine structures, components,

assemblies, and transparencies to a wide range of aircraft and engine prime contractors and other first-tier suppliers. It operates in three main product areas: aero structures; engine structures and systems; as well as special products such as ice protection, fuel systems, and flotation devices.

This will be GKN Aerospace's fourth ETP Agreement, the first in the last five years. GKN Aerospace has a total of five California facilities: Garden Grove, El Cajon, Burbank, Camarillo, and Santa Ana. This project is targeted to train approximately 331 workers in the Santa Ana location only. The 335,000 sq. ft. Santa Ana facility manufactures precision fabricated honeycomb structures and assemblies using proprietary technology and processes. The honeycomb consists of flanged ribbons that are resistance spot welded to face sheets, creating a unique, high-strength panel material with superior performance characteristics. The Company's broad customer base includes Pratt & Whitney, UTAS, Rolls Royce, Boeing Spirit, Boeing 767, and Boeing 737 MAX.

PROJECT DETAILS

GKN Aerospace's training needs are heavily driven by the significant increase in customer demands. In December 2013, the Company was awarded Boeing's new 737 MAX program. The 737 MAX is Boeing's newest single-aisle aircraft. It was designed to build on the Next-Generation 737's popularity and reliability while delivering unsurpassed fuel efficiency in the single-aisle aircraft market. The projected ramp-up time for this project is estimated to extend to June 2017.

With the awarded Boeing work, the Santa Ana facility is positioned for the development and long-term production. The Company will be tasked to produce titanium inner wall (TIW) structures, which will be used in the new General Electric Leading Edge Aviation Propulsion (LEAP) engine on the new Boeing 737 MAX aircraft. The TIW design requires the use of an advanced material, Beta 21S titanium alloy chosen for its ability to withstand high temperatures and corrosive environments during operation in the aircraft engine. Combined with the Company's proprietary honeycomb structural design, the TIW will allow the engine to run at much higher temperatures than its predecessor. Preparation for the TIW project has required custom tools and processes to produce the detailed parts needed for final assembly.

Retrainee - Job Creation

In support of Job Creation, the Panel is offering incentives to companies that commit to hiring new employees. Training for newly-hired employees will be reimbursed at a higher rate, and trainees will be subject to a lower post-retention wage.

The Company has committed to hiring 75 employees (Job Number 2). The date-of-hire for all trainees in the Job Creation program will be within the three-month period before contract approval or within the term-of-contract. Trainees will be hired into "net new jobs" as a condition of contract.

To support growth, GKN Aerospace has committed to implementing three additional shifts. The Company has developed strategic objectives to increase the number of skilled workers as well as infrastructure and technological advancements. To further support the exponential growth caused by the acquisition, GKN Aerospace has invested \$70M on the following new equipment to be installed at the facility between 2013 and 2017:

- Panel Fabrication Machines
- Metal Presses and Shearing Machines

- Chemical Processing Lines
- Vacuum Furnaces
- Robotic Equipment
- Electrical Discharge Machining (EDM)
- Automated Assembly Lines
- Drying Ovens

Training Plan

The Company has deployed and implemented a curriculum utilizing an Analysis, Design, Develop, Implement, and Evaluate (ADDIE) model. The ADDIE model is the generic process traditionally used by instructional designers or training developers to represent a dynamic, flexible guideline for building effective training and performance support tools. As a result, the curriculum will augment and strengthen existing training courses to empower employees with knowledge and skills necessary to meet specific requirements and increased customer demands.

Computer Skills (10%) – Training will be offered to all trainees as it pertains to their job duties. Course topics in CNC, Robotics, ERP, and TIPQA Application Skills training will provide trainees with the ability to streamline processes and improve customer responsiveness across all departments.

Continuous Improvement (10%) – Training will be offered to all job occupations. Trainees will receive course topics in Six Sigma, Lean Manufacturing, Statistical Process Control, and Project Management to support increased customer demands while complying with quality standard requirements.

Manufacturing Skills (50%) – Training will be offered to Technicians, Mechanics, Welders, Inspectors, Operators, Machinists, Supply Chain, Maintenance, and Managers to develop their skills in all areas of production, processes, and procedures. Majority of the training will focus on the new machines. Training will allow trainees to operate equipment and processes more efficiently and improve product quality.

Productive Laboratory – Manufacturing Skills (30%)

The Panel has adopted regulations to authorize reimbursement for training delivered in a Productive Laboratory (PL) setting. PL trainees may produce goods for profit as part of the training, in the courses identified under the Curriculum. The instructor must be dedicated to training delivery during all hours of training, and special attendance rosters will be used to assist in monitoring.

In this proposal, GKN Aerospace requests PL training in Manufacturing Skills topics in Robotics, Mechanics, Electrical, Electronics, Welding, Manufacturing, Metal Fabrication, and Machine Processes and Techniques, as well as CNC, Equipment Maintenance, and Operation of Automated Machinery. The Company determined that PL training presents the most effective way to train manufacturing skills to be able to leverage maximum results from SMEs to trainees in the form of structured hands-on-training. Training will be delivered to approximately 125 existing and newly-hired Technicians, Mechanics, Welders, Inspectors, Operators, Machinists, and Maintenance Staff. Trainees may receive all their training hours in PL-Manufacturing Skills or a combination of class/lab including PL hours. Training will be specific to the type of equipment and/or process to ensure trainees receive a broader understanding of the entire manufacturing process.

The Company anticipates a 25% to 50% decrease in production on particular machinery or process during PL as trainees and machinery will not be expected to produce the same output level. During the decreased production time trainees will be able to focus on product quality and acquire the skills to become competent in the operation of the equipment.

A tasks and competencies evaluation has been provided which reflects most of the PL course topics take up to 100 hours to complete, specifically for Operators, Welders, and Inspectors who are significantly impacted by the Company's implementation of new equipment and manufacturing processes. As such, GKN Aerospace is requesting up to the 60-hour PL cap in Manufacturing Skills training for the aforementioned trainees.

The PL training will be delivered by qualified Subject Matter Experts (SMEs) and/or machine-certified trainers. Trainers will be responsible for directing the operations and instructions as well as providing immediate feedback to the trainee as work is performed. Trainers will document all training daily.

The trainer-to-trainee ratio will vary between 1:1 and 1:3. The 1:3 ratio is the ideal number of trainees to cycle through the PL program during training periods when SMEs and/or certified trainers and training equipment (decreased production equipment) is limited. The higher 1:3 ratio for machinery training will allow the Company to only take the equipment down once for four hours rather than three times with a total of 12 hours downtime. In addition, trainees must work in teams to allow for effective knowledge and skills transfer across three shifts in a single four-hour course of instruction. Consequently, this also requires a higher trainer-to-trainee ratio (1:3) during certain PL training sessions. As such, staff will benefit from being trained at the same time in one training session rather than two or three repetitive sessions.

Temporary to Permanent Hiring

Some trainees in Job Number 2 come under Panel guidelines for "temporary to permanent" employment. GKN Aerospace has retained these employees through a temporary agency, with the intention of hiring them into full-time, permanent positions after training.

These trainees must be determined eligible to participate in ETP-funded training before the start of training, while on payroll with the temporary agency. However, the retention and post-retention wage requirements cannot be satisfied until after they have been hired by GKN Aerospace. Until then, GKN Aerospace will not receive progress payments.

Commitment to Training

GKN Aerospace represents that ETP funds will not displace the existing financial commitment to training. Safety training is, and will continue to be, provided in accordance with all pertinent requirements under state and federal law. In the past, Company-funded training included a full range of mandatory job-specific and company-wide topics delivered via Classroom, Laboratory, on-the-job, or Computer-Based Training (self-paced).

➤ Training Infrastructure

The Company recently hired a Training Manager and Training Coordinator to oversee, manage, schedule, monitor, and track training. Curriculum development will encompass all new and existing objectives. Training success will be measured through peer-review and quantifiable tests/exams to assess understanding, track progress, and reduce nonconformance reports (NCRs).

Impact/Outcome

A comprehensive training certification program is currently being developed to equip GKN Aerospace workers with the skills needed to achieve facility and company-wide business goals. Some trainees may receive Six Sigma (Green Belt and Black Belt) certification, Kaizen certification, and other in-house certifications for core training. These certifications will create a dynamic workforce, allowing the Company to exceed customer expectations through solid employee job performance.

RECOMMENDATION

Staff recommends approval of this proposal.

DEVELOPMENT SERVICES

N/A

ADMINISTRATIVE SERVICES

N/A

TRAINING VENDORS

To Be Determined

Exhibit B: Menu Curriculum**Class/Lab Hours**

8 - 200 Trainees may receive any of the following:

COMPUTER SKILLS

- Computer Numerical Control Application
- Robotics Application
- Enterprise Resource Planning
- TIPQA Software Application
- Programmable Logic Controller Application
- Microsoft Office (Intermediate and Advanced)

CONTINUOUS IMPROVEMENT

- Six Sigma
- Statistical Process Control
- Design of Experiments
- LEAN Manufacturing Techniques
- Project Management
- Time Management
- Presentation Skills
- Communication Skills
- Leadership Skills

MANUFACTURING SKILLS

- Robotics Processes and Techniques
- Mechanics Processes and Techniques
- Electrical Processes and Techniques
- Electronics Processes and Techniques
- Welding Processes and Techniques
- Manufacturing Processes and Techniques
- Quality Systems Procedures
- Computer Numerical Control (CNC) Processes and Programming Techniques
- Machine Programming Processes and Techniques
- Equipment Maintenance and Troubleshoot
- Operation and Control of Automated Machinery
- Troubleshooting and Fault Isolation of Automated Machinery
- Machine Tooling
- Metal Fabrication Techniques
- Non-Destructive Testing

Productive Lab Hours

0-60

MANUFACTURING SKILLS (1:3 ratio)

- Robotics Processes and Techniques
- Mechanics Processes and Techniques
- Electrical Processes and Techniques
- Electronics Processes and Techniques

- Welding Processes and Techniques
- Manufacturing Processes and Techniques
- Computer Numerical Control (CNC) Processes and Programming Techniques
- Machine Programming Processes and Techniques
- Equipment Maintenance and Troubleshoot
- Operation and Control of Automated Machinery
- Metal Fabrication Techniques

Safety Training will be limited to 10% of total training hours per-trainee

Note: Reimbursement for retraining is capped at 200 total training hours per trainee, regardless of the method of delivery. PL is capped at 60 hours per-trainee.